FMCSA GUIDELINES FOR

SAFETYNET-2000 Computer Systems
software and hardware issues

Updated as of January 12, 2001

This document contains the guidelines for software and hardware components necessary to run SAFETYNET 2000.

1. Software Components

The recommended software needed to operate SAFETYNET 2000 is shown below for both networked and stand-alone configuration.

1.1 Network Configuration

- APPLICATION: SAFETYNET 2000 System application software

- CLIENT OPERATING SYSTEM: Windows NT Workstation 4.0 (Service Pack 4 or higher), Windows 2000 workstation, Windows 95 (Service Pack 1 Update or higher) or Windows 98 SE.

- SERVER OPERATING SYSTEM: Windows NT Server (Service Pack 4 or higher) is preferred, but system will run under Novell NetWare 4.x or 5.x Network/Database Server Operating System. As of this document, Windows 2000 has not been fully tested for server operation. Note that Oracle Corporation stopped supporting Oracle Workgroup (see below) for Novell NetWare 3.12 on December 31, 1998.

- DATABASE MANAGEMENT SYSTEM -- Oracle Workgroup 7.3 -- (included with SAFETYNET 2000 software) updated Oracle Installation for Windows 2000. Note that SAFETYNET 2000 will not presently operate under later versions of Oracle, but the issue will be addressed in future versions.

- REPORT GENERATOR -- Crystal Reports Professional 7 Runtime Engine -- Pre-defined report/query generation software (included with SAFETYNET 2000 software)

- COMMUNICATIONS -- DISTINCT TCP/IP -- for connection to the SAFER Data Mailbox (included with SAFETYNET 2000 software)

- TECHNICAL SUPPORT COMMUNICATIONS -- pcANYWHERE 9.0 -- recommended to support remote on-line technical support

- AD-HOC REPORT/QUERY GENERATION SOFTWARE (optional) -- Crystal Reports Professional 7 or higher.

1.2 Stand-Alone Configuration

• APPLICATION: SAFETYNET 2000 System application software.

• OPERATING SYSTEM: Windows NT Workstation 4.0 (Service Pack 4 or higher) recommended. Other options are Windows 95 (Service Pack 1 Update or higher), or Windows 98 SE. Note that Windows 2000 has not yet been tested in the stand-alone configuration.

• DATABASE MANAGEMENT SYSTEM: Personal Oracle 7.3 -- (included with SAFETYNET 2000 software) Updated Oracle Installation for Windows 2000.

• REPORT GENERATOR: Crystal Reports Professional 7 Runtime Engine -- Pre-defined report/query generation software (included with SAFETYNET 2000 software).

• COMMUNICATIONS: DISTINCT TCP/IP -- for connection with SAFER Data Mailbox (included with SAFETYNET 2000 software).

• TECHNICAL SUPPORT COMMUNICATIONS: pcANYWHERE 9.0.

• AD-HOC REPORT/QUERY GENERATION SOFTWARE (optional): Crystal Reports Professional 7 or higher is recommended).

2. Hardware Components

The recommended hardware configuration to operate the SAFETYNET 2000 System is shown below for both networked and stand-alone configurations.

The "preferred" specifications should be used for new hardware purchases.   Note that rapidly changing computer technology will make even these preferred specs seem conservative. New procurements should reflect specs above the preferred whre both best price & performance benefit. The "minimum" specifications below correspond to the use of existing hardware. Note that hardware satisfying only the "minimum" specifications may result in significantly slower performance when running SAFETYNET 2000. Performance on older hardware may be further degraded by future updates to SAFETYNET 2000.

In addition to the specifications below, all hardware must be Year 2000-compliant. It is recommended that all older hardware be tested for Year 2000-compliancy.

The specifications below are for the SAFETYNET 2000 application only. More powerful hardware may be needed if running other major applications or services simultaneously with SAFETYNET 2000 on the same machine.

2.1 Hardware for Network Configuration

Several items are worth noting before listing the specific hardware components necessary to run SAFETYNET in a networked configuration.

Depending on the number of users connected to the network and the amount of network traffic, it will be beneficial in some cases to separate the database server from the network server to improve overall performance of the network as well as the SAFETYNET application.

The selection of the database server platform is also a serious consideration. With Oracle, the database server can run on a Windows NT platform or as a NetWare Loadable Module (NLM) on a Novell NetWare network server. If the SAFETYNET site has the option of choosing either Windows NT or Novell NetWare for the database server, it is strongly recommended that Windows NT be selected. This is due to a number of weaknesses that NetWare NLM's have in supporting client/server applications (e.g., SAFETYNET). In particular, NetWare NLM-based database servers suffer from lower network and database stability and integrity, less efficient memory usage and optimization, and reduced performance compared with Windows NT database servers. Note that a Windows NT database server can co-exist in a Novell NetWare environment. As of this date the full network configuration has not been extensively tested on Windows-2000, but no problems are expected.

Note that while Intel Pentium processors are listed, there are no known problems with AMD Athlon or similar Windows compatible processors with processing capabilities similar to the Intel Pentium line. Pentium IV processors are also an option.

Database Server

- Processor:
  - S   Preferred -- Pentium III processor (or equivalent) @ 600 MHz.
  - S   Minimum -- Pentium II processor (or equivalent) @ 350 MHz.

- Memory:
  - --   Windows NT Server 4.0 -- 512 MB RAM preferred, 128 MB RAM minimum,
  - --   Novell NetWare 4.x/5.x Server -- 512 MB RAM preferred, 128 MB RAM minimum, (note that memory requirements increase as the hard disk size increases)

- Hard Disk: 20 GB or better preferred, 8 GB minimum,. For Windows NT Server, performance will improve with 2 or more physical hard disks. If only 1 physical hard disk is available, prefer this to be configured as 2 logical hard disks.

- Peripherals:
  - --   17" XGA monitor preferred, minimum would be 15" SVGA monitor,
  - --   Video graphics adapter to match monitor resolution,
  - --   One 3.5" high-density disk drive (LS-120 diskette drive is optional),
  - --   CD-ROM drive: 32x preferred , minimum is 8X speed (read/write CD-ROM drive is optional),
  - --   Tape backup system: 15 GB preferred, 8 GB minimum,
  - --   One parallel printer port,
  - --   Two RS-232C serial ports,

- -- Uninterruptible power supply (UPS),
- -- At least one spare slot on the motherboard,
- -- An HP-compatible laser printer,
- -- An appropriate LAN interface card,
- -- Microsoft-compatible mouse,
- -- Fax modem: 56kb/s preferred, 28.8kb/s minimum (optional).

Client Workstation

- Processor:
  - -- Preferred -- Pentium III processor (or equivalent), 600 MHz processor speed.
  - -- Minimum -- Pentium II processor (or equivalent), 350 MHz processor speed.

- Memory: 128 MB or better preferred, 64 MB RAM minimum.

- Hard Disk: 20 GB preferred, 6 GB minimum.

- Peripherals:
  - -- 17" XGA monitor preferred, minimum would be 15" SVGA monitor,
  - -- Video graphics adapter to match monitor resolution,
  - -- One 3.5" high-density disk drive (LS-120 diskette drive is optional),
  - -- CD-ROM drive: 32X preferred, 8X speed minimum,
  - -- One parallel printer port,
  - -- One RS-232C serial port,
  - -- Uninterruptible power supply (UPS),
  - -- At least one spare slot on the motherboard,
  - -- An appropriate Network Interface Card (NIC),
  - -- Microsoft-compatible mouse,
  - -- Fax modem: 56kb/s preferred, 28.8kb/s minimum.

2.2 Hardware for Stand-Alone Configuration

The hardware components needed to run a stand-alone configuration of SAFETYNET are as follows:

- Processor:
  - – Preferred -- Pentium III processor (or equivalent), 600 MHz processor speed.
  - -- Minimum -- Pentium II Processor (or equivalent), 350 MHz processor speed.

- Memory: 128 MB RAM preferred, 64 MB RAM minimum.

- Hard Disk: 10 GB. Performance will improve with 2 or more physical hard disks. If only 1 physical hard disk is available, prefer this to be configured as 2 logical hard disks.

- Peripherals:
  - -- 17" XGA monitor preferred, minimum would be 15" SVGA monitor,
  - -- Video graphics adapter to match monitor resolution,
  - -- One 3.5" high-density disk drive (LS-120 diskette drive is optional),

- -- CD-ROM drive: 32X preferred, 8X speed minimum,
- -- Tape backup system: 10 GB,
- -- One parallel printer port,
- -- One RS-232C serial port,
- -- Uninterruptible power supply (UPS),
- -- At least one spare slot on the motherboard,
- -- An HP-compatible laser printer,
- -- Microsoft-compatible mouse,
- -- Fax modem: 56 kb/s preferred, 28.8kb/s minimum.

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